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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,631	01/30/2007	Kiyoshi Takeuchi	W1878.0230	1764

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EXAMINER	
LEE, EUGENE	

ART UNIT	PAPER NUMBER
2815	

MAIL DATE	DELIVERY MODE
11/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/575,631	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	EUGENE LEE	2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *16-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 April 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/7/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species IX (claims 1-15) in the reply filed on 8/5/08 is acknowledged.

Claims 16 thru 22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8/5/08.

Drawings

2. Figure 1(a), 1(b), 2(a)-2(c) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

4. Claims 3 thru 10, 14, and 15 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 thru 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 12-14 of claim 1, it is unclear how "the buried conductor interconnect connects one of the source and drain regions of the semiconductor raised portion and another conductive portion." For example, in Fig. 4(d), the buried conductor interconnect 411 is connected to the source/drain region 406, however, the buried conductor interconnect appears isolated from the other buried conductor interconnect 411, and does not connect the source/drain region 406 and the another conductive portion 411. For the sake of compact prosecution, the Examiner is interpreting that the buried conductor interconnect, source/drain region, and another conductive portion are indirectly to each through the semiconductor raised portion; however, appropriate clarification and/or correction are required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. In view of the 112 rejection above, claims 1, 3, 7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Yeo et al. 6,897,433 B2. Yeo discloses (see, for example, FIG. 5 and 12j) a transistor (semiconductor device) comprising an active semiconductor layer (semiconductor raised portion) 155, substrate plane, gate electrode 160, gate dielectric (gate insulation film) 164, source region 172, drain region 174, passivation layer (interlayer insulating film) 194, conductive material (buried conductive interconnect/another conductive portion) 196.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yeo et al. '433 B2 as applied to claims 1, 3, 7, and 8 above, and further in view of Yeo 7,105,894 B2. Yeo et al. '433 B2 does not disclose a buried conductor interconnect having a lower face below the upper face of the semiconductor raised portion. However, Yeo '894 B2 discloses (see, for example, Figure 11D) a

semiconductor fin comprising a fin (semiconductor raised portion) and a conductive material (buried conductor interconnect) 72. It would have been obvious to one of ordinary skill in the art at the time of invention to have a buried conductor interconnect having a lower face below the upper face of the semiconductor raised portion in order to form a contact that may be formed by overetching.

11. Claims 4 thru 6, and 9 thru 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeo et al. '433 B2 as applied to claims 1, 3, 7, and 8 above, and further in view of Wang et al. US 2005/0029556 A1. Yeo et al. '433 B2 does not disclose a first and second transistor. However, Wang discloses (see, for example, FIG. 1 and 2) a CMOS SRAM cell composed of a flip flop having cross-coupled first and second inverters INV1 and INV2, and a first and second transfer transistors Qt1 and Qt2 coupled to the flip-flop. The first inverter INV1 includes a first load transistor Q11 and a first driver transistor Qd1 and the second inverter INV2 includes a second load transistor Ql2 and a second driver transistor Qd2. It would have been obvious to one of ordinary skill in the art at the time of invention to have a first and second transistor in order to use the transistor in a memory like an SRAM cell.

INFORMATION ON HOW TO CONTACT THE USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUGENE LEE whose telephone number is (571)272-1733. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eugene Lee
November 21, 2008
/Eugene Lee/
Primary Examiner, Art Unit 2815